

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-34 are presently active in this case, Claims 1-21 and 33 amended by way of the present amendment.

In the outstanding Official Action, Claims 21 and 33 were objected to for informalities; Claims 1-4, 7-14 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 6,185,513 to Plettner et al. in view of U.S. Patent 6,691,068 to Freed et al.; Claims 5 and 6 were rejected under 35 U.S.C. §103(a) as being unpatentable over Plettner et al. and Freed et al., and further in view of Patent Publication US2003/0113943A1 to Kischkovich et al.; Claims 15-19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Patent Publication 2004/004065A to Usui et al. and Claims 21-34 were rejected under 35 U.S.C. §103(a) as being unpatentable over Plettner et al. in view of Freed et al.; and Claim 28 was objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

First, Applicants wish to thank Examiner Kim and Supervisory Patent Examiner (SPE) Hoff for the August 25, 2005 personal interview at which time the outstanding issues in this case were discussed. During the interview, Applicants presented amendments and arguments substantially as indicated in this response. Agreement was reached that the amendments and arguments presented herein appear to overcome the rejection of the outstanding Official Action.

In addition, Applicants wish to thank Examiner Kim for the indication of allowable subject matter in Claim 28. However, Applicants wish to maintain Claim 28 in dependent

form at this time since Applicants believe that Claim 21 patentably defines over the cited references.

Turning now to the merits, Applicants' invention is directed to a method and system for facilitating safe disposal of a consumable part of a semiconductor process chamber. As discussed in the background of Applicants' specification, such consumable parts are exposed to toxic and dangerous chemistries making their disposal an important environmental, health and safety issue. Moreover, the disposal method depends in part on the chemicals that the consumable part has been exposed to. The present inventors have recognized, however, that it is difficult to keep track of the chemistries that a consumable part has been exposed to, and therefore difficult to provide proper disposal of such consumable parts. Applicants' invention is directed to addressing these problems.

Specifically, Applicants' Claim 1, as amended, recites a system for facilitating safe disposal of a consumable part inside a semiconductor processing tool. The system includes a process chamber having the consumable part therein and an electronic monitoring device dedicated to the consumable part. The electronic monitoring device includes a memory unit configured to store a history of the chemical exposures of the consumable part within the process chamber, a processor connected to the memory unit and configured to communicate with the memory unit to store the history, and a power supply circuit connected to the memory unit and the processor, and configured to transfer power to the memory unit and the processor. Thus, Applicants have amended Claim 1 to clarify that the electronic monitoring device is part of a system that includes the semiconductor processing chamber and the consumable part, and further that the electronic monitoring device is dedicated to the consumable part and configured to store a history of the chemical exposures of the consumable part.

In contrast, the cited reference to Plettner et al. discloses a data recorder used to compile measured data such as the environment that a food product is exposed to. Thus, as acknowledged by the outstanding Official Action, Plettner et al. is completely unrelated to a semiconductor processing system as now clearly recited in Applicants' Claim 1.

The cited reference to Freed et al. discloses a method and apparatus for obtaining data to monitor a process within a semiconductor processing chamber. As seen in the figures of Freed et al., a sensor apparatus may include a power supply, processor, a memory and at least one sensor. The sensors have the function of measuring a process performed within the semiconductor processing chamber.¹ Further, the process is monitored in a highly resolves spatial monitoring process that uses a plurality of sensors spatially arranged on a substrate. However, there is no discussion in Freed et al. of the sensor apparatus being dedicated to consumable part or a memory that stores chemical exposure of the consumable part as required by Applicants' Claim 1. These references are completely silent as to a consumable part and the need to record the exposure of such part.

Applicants' Claim 21 recites a method for facilitating disposal of a consumable part from a semiconductor processing tool. The method includes acquiring data associated with chemical exposures of the consumable part while inside the semiconductor processing tool, storing in a memory unit dedicated to the consumable part a history of the chemical exposures of the consumable part. Also recited is reading a history of the chemical exposures to identify from the history toxins that the consumable part was exposed to while inside the semiconductor processing tool and disposing of the consumable part based on the toxins identified from the history. Thus, Applicants' Claim 21 also recites that a memory unit is dedicated to the consumable part and that data for chemical exposures is collected for the consumable part. As noted above, Plettner et al. and Freed et al. do not disclose anything

¹ See Freed et al. at column 6, line 65 – column 7, line 7.

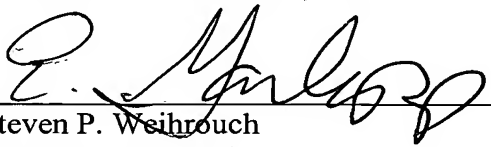
about a consumable part. Thus, Applicants' Claim 21 also patentably defines over the cited references to Plettner et al. and Freed et al. In this regard, Applicants note that paragraph 6 of the outstanding Official Action inadvertently cites *ex parte Masham* in rejecting Claim 21. However, as discussed in the August 25, 2005 interview, *ex parte Masham* is relevant to apparatus claims and is therefore inapplicable to method Claim 21.

For the reasons discussed above, amended independent Claims 1 and 21 (and claims depending therefrom) patentably define over the cited references to Plettner et al. and Freed et al. Further, the secondary references to Kischkovich et al. and Usui et al. are cited only for features of the dependent claims and do not correct the deficiencies of Plettner et al. and Freed et al.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application. The present application is believed to be in condition for formal allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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